

In the claims:

1 (currently amended) An improved encoder for a CATV upstream data channel transmitter, comprising:

a ~~convolutional~~ BICM encoder for receiving data values, said encoder concatenated with an outer Reed-Solomon encoder,

a bit-interleaver interconnected with said encoder, and

a symbol mapper interconnected with said bit-interleaver.

2. (currently amended) The encoder of claim 1, wherein said simple mapper is a ~~QPSK~~ or QAM mapper.

3 (currently amended) A coding system which comprises:

an encoder for a CATV upstream data channel transmitter, comprising:

a BICM encoder for receiving data values, said encoder concatenated with an outer Reed-Solomon encoder,

a bit-interleaver interconnected with said encoder, and

a symbol mapper interconnected with said bit-interleaver, and

a bit interleaved decoder for a CATV upstream channel receiver, comprising:

a scorer for receiving symbols,

a bit de-interleaver interconnected with said scorer, and

a convolutional decoder interconnected with said bit de-interleaver.

4. (canceled)